

IN THE CLAIMS:

1. (Currently Amended) An add multiplexer comprising:
 - an input port;
 - an optical circulator comprising a first port, a second port, and a third port, said first port of said optical circulator coupled to said input port;
 - an optical monitor mechanism coupled to said third port of said optical circulator;
 - a wavelength add mechanism having an input port X that is connected to said second port of said optical circulator, an input port Y and an output port Z, which wavelength add mechanism is adapted to direct substantially all of a signal's optical power that is applied to input port Y flowing out of its output port Z, leaving an errant signal fraction of said optical power flowing out of said input port Y and adapted to receive optical signals from said second port and to provide no optical signals to said second port;
 - a tunable signal source coupled to interposed between said input port Y and wavelength add mechanism, wherein said optical monitor mechanism is coupled to said third port of said optical circulator and to said tunable source thereby providing a feedback path that allows said errant signal fraction of said optical power flowing out of said input port X to influence the signal is applied to input port Y; and
 - an output port coupled to said output port Z wavelength add mechanism.
2. (Currently Amended) An add multiplexer of claim 1 wherein said optical monitor measures the optical power at said third port 3 of said optical circulator.
3. (Currently Amended) An add multiplexer of claim 1 wherein said optical monitor measures the wavelength of the light at said third port 3 of said optical circulator.
4. (Currently Amended) An add multiplexer of claim 1 wherein said optical monitor measures both the optical power versus wavelength.
5. (Canceled)

6. (Canceled) .

7. (Currently Amended) The add multiplexer of claim 1 ~~this~~ wherein a drop mechanism is coupled in between said input port and said first port of said optical circulator.

8 - 24. (Canceled).